The Royal Cancer Hospital

CENTENARY

1851 — 1951

THE ROYAL CANCER HOSPITAL
Fulham Road, London.

1851 — 1951

A short history of the Royal Cancer Hospital
prepared for the Centenary 1951.

Dedicated to
WILLIAM MARSDEN, M.D.
Founder of the Hospital

BUCKINGHAM PALACE

The Chairman,

The Royal Cancer Hospital.

I deeply appreciate the kind and loyal message which you have conveyed to me on behalf of all at the Royal Cancer Hospital.

As its Patron, I am glad to hear that the hundredth anniversary of the Hospital's founding is being so fittingly celebrated, and trust that it will long continue to carry out the great work which it has done in the past.

GEORGE R.

10th April, 1951.

His Majesty KING GEORGE VI,

THE ROYAL CANCER HOSPITAL

ITS FOUNDATION AND PROGRESS

FIRST FOUNDATION

On February 10, 1851 Dr. William Marsden called together at his residence, 65 Lincoln's Inn Fields, a number of influential people who decided to establish the first hospital in the world devoted solely to the treatment of cancer and allied diseases. Three months later the Free Cancer Hospital was opened at 1, Cannon Row, Westminster, but it was able to deal only with out-patients. The inadequacy of this arrangement soon became apparent, and it proved impossible to make satisfactory provision for all the patients seeking help. In June, 1852, therefore, six beds were provided for the reception of in-patients, but this was not enough, and in October another in-patient department was opened in a house in Hollywood Road, West Brompton. At first, though there was accommodation for twenty patients, the financial resources of the hospital allowed only six to be occupied.

In 1854 the out-patient department and administrative offices were removed to 5, Waterloo Road, Pall Mall, but this was apparently a purely temporary measure (possibly due to the falling-in of the lease of 1, Cannon Row), for in 1855 they were again removed, this time to 167, Piccadilly.

THE PRESENT FOUNDATION

The necessity of still further accommodation soon arose and, in spite of continued financial stress, the Committee purchased part of the present site in Fulham Road. The purchase was completed in 1856, and the Foundation Stone of the original part of the hospital was laid in 1859. The first patient was admitted to this building on January 10, 1862 and history repeated itself. The hospital contained six wards, sufficient for eighty patients, but owing to lack of funds only thirty to forty could be occupied. Improvement, however, had already begun following a generous gift from H.M. Queen Victoria, and it was not long (1864) before all the beds were available for the use of patients.

A further portion of the hospital site was bought in 1878, and the next year an out-patient department was established in the Fulham Road building. Thereafter no more patients were seen at 167, Piccadilly, though the Board Room and Secretary's Office remained there till some years later. In 1881 extensions were begun and two new wings were added, one on each side of the original structure. These were opened in 1883, and the hospital accommodation was thereby increased to 120 beds. The follow-

THE EXTERIOR OF THE HOSPITAL

ing year, 1884, the Board Room and Office transferred to the Fulham Road and 167, Piccadilly was vacated.

For the past sixty-seven years the whole work of the Royal Cancer Hospital has been concentrated in the building on the present site, and such has been the increase in the work that the buildings have undergone almost unceasing alteration and extension.

In 1887 a small freehold cottage, situated in the grounds of the hospital, was converted "for the reception, by election, of a limited number of supposed incurable cases, for life, or until permanent cure takes place." It was used for this purpose until 1911, when it was demolished and its place taken by a backward extension of the East Wing of the Hospital.

NURSES' HOME

Until 1900 the nurses were housed on the top floor of the main building but in that year another cottage was built to accommodate the night nurses. In 1904 a Nurses' Home was put up on the west side of the grounds. Three years later a third house was built within the precincts for the staff nurses, and soon afterwards a real effort was made to deal adequately with the housing of the Nursing Staff. In 1910 the Night Nurses' and the Staff Nurses' houses were pulled down, and the whole Nursing Staff was transferred to the new Nurses' Home which, having been subsequently enlarged on three separate occasions, still forms part of the hospital.

Of the later alterations to the hospital itself only one need be mentioned. To perpetuate the memory of Sir Charles Ryall, the top floor was removed and the Ryall Theatre Block was substituted for it.

THE HOSPITAL'S NAME

As the hospital grew, so from time to time its name changed. The word "Free" was soon dropped, but was later (1864) revived; this time, however, as a suffix, so that the name read "Cancer Hospital (Free)." Why, or by what authority, this change was made does not appear in the records. In 1910 H.M. King George V granted a Royal Charter of Incorporation, by which, amongst other things, "The" was added to the Hospital's name. Finally, in April, 1936, H.M. King Edward VIII commanded that thenceforward the hospital shall be Royal.

EARLY DIFFICULTIES

During the early years of its existence the hospital passed through difficult and troublous times. The financial support which it received was meagre, efforts to increase its income met with disappointing results, and the scope of its activities was consequently restricted. The Royal Cancer

THE NURSES' HOME AND GARDEN

Hospital was amongst the first two or three special hospitals established for the treatment of patients suffering from disease for which the general hospitals also provided. It thus helped to establish a new principle of medical policy and emphasised the opinion, now universally held, that more progress is likely to be made by persons devoting themselves to the special study of one disease than by those to whom the disease is only one of a large number. To-day such an opinion needs no apology, but in 1854 that was by no means the case, and many people thought that such hospitals were unnecessary and extravagant. These views were expressed in a letter from H.M. Queen Victoria, in which the Queen points out (in reply to a memorial praying for Her Majesty's patronage) that Her Majesty "must decline contributing to a hospital for the exclusive treatment of one disorder, the sufferers under which malady are not excluded from General Hospitals," and that "it cannot be expected that private subscriptions will sufficiently provide for special hospitals for each disorder". Subsequent events showed that special hospitals help to satisfy a real need. During the next fifteen years several more were founded, and the change in outlook is once again expressed by Her Majesty who, in 1859, was graciously pleased to make a donation of £100 to the funds of the hospital. So complete a change of opinion must be strong evidence of the valuable work done by the hospital during the first eight difficult years of its existence. Her Majesty's generosity was doubly useful because it led to a large increase in contributions and was thus directly responsible for the completion of the new building.

Throughout all these difficulties and manifold changes the primary object of the hospital has always been kept in view, viz, the treatment of the sick poor. Nothing is withheld or refused so long as it is calculated to benefit the patients. This has entailed an ever-increasing expenditure on structure, food, nursing, instruments and apparatus, and the ancillary services.

For a long time all treatment of cancer was merely empirical but since the first days of the hospital, as was natural and proper, every means of cure that offered any reasonable hope has been tried. An example occurs in one of the earliest Surgical Reports, where it is recorded that "a medical man's announcement, that he had discovered a remedy for cancer (a statement speedily disseminated far and wide by the Press) raised in the public mind the fond hope that this most intractable class of diseases was at length about to be brought under scientific control. This hope, we need hardly say, was (like so many previous ones based on a similar foundation) doomed to disappointment. We ourselves—while remembering the utter collapse of so many cancer cures, introduced even more confidently than the present—nevertheless deemed it our duty to give the drug in question ('Chian Turpentine') a full and protracted trial in our wards. After fair

PATIENTS' SITTING ROOM

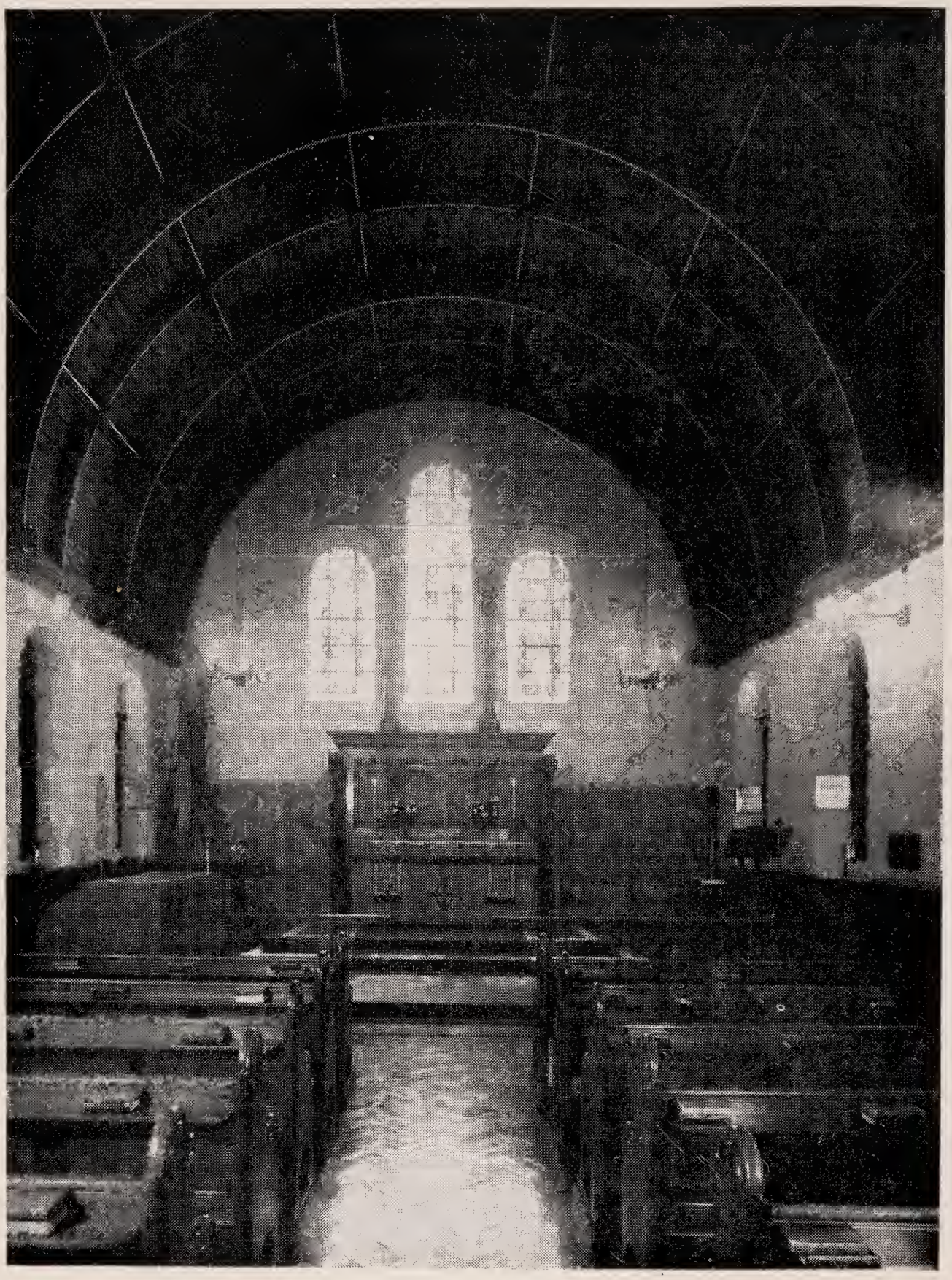
investigation, our results were made public at the earliest possible date and, we trust, materially contributed to the prevention of fallacious hopes, whose ultimate failure could but vastly aggravate the pangs already endured by unfortunate sufferers."

In spite of such failures as this, in several of their Annual Reports the surgeons (there was no physician) record "undoubted cures" of cancer in the hospital, just as to-day we read in the lay Press of wonderful cures effected by some particular diet or drug, by some manipulation or by faith. The fact that in every case the treatment which effected these cures has fallen into oblivion shows that further trial proved it to be valueless, and any cure, if cure there was, merely fortuitous.

In yet other respects the parallel between past and present times is striking. For instance, even at the date of the foundation of the hospital there are heard the same cries as are constantly heard to-day. In the first Surgeons' Report, dated October 11, 1851, Dr. Marsden "points to the alarming increase in the disease, evidenced by the fact that, whereas in the year 1839 463 deaths from cancer were registered in the London district, in the year 1850 there were registered 889, although the increase in population was only to the extent of one-eighth." A year or two later he bewails the fact that so many patients fail to present themselves for treatment until the disease is so far advanced as to be beyond all hope. In 1855 he attributes the failure of treatment in large part to the "isolation of medicine from surgery," and to the fact that "a combination of these means is either not well understood . . . . or is altogether ignored." Throughout the history of the Royal Cancer Hospital "team work" has been the moving principle of treatment, and is more than ever insisted on at the present time.

In 1908 a physician was appointed and in 1920 an assistant physician, so that methods of treatment other than purely surgical might be tried out.

Progress in the treatment of cancer has been slow, and the founders of the hospital realised the difficulties that faced them. It appeared that in perhaps the majority of cases little, if anything, could be done beyond the application of palliative measures, the mere alleviation of pain, and so part of the hospital was devoted to the accommodation of patients past all hope, none of whom might be discharged till death released him. While, too, medicine had little to offer, surgery was still in its infancy, and its risks were such that it was employed only with the utmost reluctance. Indeed, such were the difficulties and dangers that no surgeon was permitted to operate upon a patient in the hospital without the written consent of one of his colleagues, and consent had to be recorded in a book kept for the purpose. This rule remained in force for some sixty years; it was repealed only in 1911, when it was enacted that each surgeon shall be solely responsible for the treatment, operative or other, of every patient under his care.



THE CHAPEL

In this connection it may be noted that a "chloroformist" was appointed in 1869. In 1897 the name of this officer was changed to "anæsthetist."

CLINICAL PROGRESS

During the hundred years of the Hospital's existence great progress has been made in the diagnosis and treatment of patients with cancer. In the early years of its activities the prospect of achieving a cure was remote and consequently the main effort of the medical staff was to alleviate suffering and sometimes perform local surgical removal of tumours in accessible parts of the body.

An important development in the surgical work of the Hospital occurred with the appointment of Mr. Ryall (later Sir Charles Ryall) in 1897 and Mr. W. Ernest Miles in 1899 as Assistant Surgeons. These gifted friends brought to the study of cancer a singleness of purpose and clarity of thought of such an order as to make the Hospital famous throughout the world as a great surgical centre. They founded a surgical tradition here which has been enhanced and developed by their successors on the staff. The principle of eradicating cancerous disease by the removal in one block of the tumour, the organ in which it has arisen and all the nearby tissues to which it might have spread was already appreciated. But it was Ernest Miles who with characteristic courage and rare surgical skill, proved in the abdomino-perineal operation that the radical removal of deep seated cancer of the rectum was feasible. The Miles' operation and its modifications remain the standard procedure for eradication of cancer of the rectum and give the patient a good hope of cure if the growth is not too advanced.

The surgeons who followed Miles made contributions in their special fields. Thus Mr. Jocelyn Swan's work on cancer of the urinary tract and Mr. Cecil Rowntree's work on cancer of the breast are well known. Mr. Cecil Joll achieved an international reputation for his contributions to the surgery of the thyroid gland and Mr. Percival Cole during the first world war developed a fine skill in plastic surgery which, when adapted to cancer work, brought comfort to many patients. Sir James Dundas Grant and Mr. Lionel Colledge played an important part in the treatment of cancer of the larynx.

During more recent years surgical developments have occurred which give hope to patients with cancer in many other parts of the body. Special mention may be made of the surgical treatment of cancer of the stomach, colon, pharynx, œophagus urinary bladder.

These increases in the surgical field have been made possible by the important advances in anæsthesia, the development of antibiotics and the extensive use of blood transfusion. Progress in the basic sciences of physics and chemistry has also assisted the clinicians in their work.

THE LIBRARY, CHESTER BEATTY RESEARCH INSTITUTE

Dr. Thomas Horder (now Lord Horder) was the first physician to be appointed to the Hospital—in 1908. Since that time he has shown great interest in the subject of cancer and has been concerned with many aspects of our work.

Fellowships have recently been instituted for award to suitable candidates who wish to carry out special research projects in cancer. Clinical Assistants are also appointed in surgery and anaesthetics.

The development of chemotherapy as a method of treatment for cancer is the subject of constant study and review.

The Hospital maintains a modern Records Department where all the details concerning the patient, including investigation and treatment, are collated and analysed. The follow-up of patients is carried out with the greatest care and valuable knowledge is steadily accruing concerning the end-results of various methods of treatment.

The progress made in recent years has led to a great increase in specialisation. The dangers inherent in this were foreseen and forestalled by the institution of the closest co-operation between all concerned and at every stage in the treatment of patients.

One of the outstanding features of the Hospital at the present time is the integration of a team of experts studying all aspects of the cancer problem. The constant interchange of ideas by individual members of the team in their daily work and in the Clinical Cancer Research Committee is bound to give an impetus to the progress which has already been made and would have gladdened the heart of our Founder.

THE CHESTER BEATTY RESEARCH INSTITUTE

Although interest in research has been a prominent feature of the Hospital's work and activities from its foundation, a great step forward was taken with the formal constitution of a Research Institute in 1909. Special tribute should be paid in the centenary year to the devotion and foresight of both the medical staff and lay Board in the early years of this century, which alone made possible a series of remarkable developments in research. The first full-time Director was Dr. Alexander Paine—whose early reports may still be read with interest—and other names associated with the work of those of these early days include those of Dr. (now Sir) Jack Drummond, Dr. E. Kettle and Dr. Casimir Funk. Dr. Paine was succeeded in 1921 by Dr Archibald Leitch, following which the work of the Institute became somewhat more concentrated upon the artificial induction of cancer by chemical means—largely as a result of the increasing general attention then being paid to this topic. This process might readily have been interrupted through the premature death of Dr. Leitch in 1931,

H.R.H. The Duchess of Gloucester being presented with a bouquet on the occasion of the Centenary Reception.

had it not been for the fact that he was succeeded by Professor E. L. (now Sir Ernest) Kennaway, who had been appointed to the Institute staff as physiological chemist some years before. Under Professor Kennaway's directorship a series of specially noteworthy advances in the study of chemical carcinogenesis was made between the late twenties and early thirties, through the work of W. V. Mayneord, J. W. Cook, I. Hieger and C. L. Hewett in particular These included the recognition of 1:2:5:6—dibenzanthracene as a potent carcinogen, (the first pure chemical substance to be so described), the isolation of 3:4—benzpyrene as the causal agent in cancer-producing pitch, and the synthesis of 3:4—benzpyrene, 20—methyl-cholanthrene and many other carcinogenic hydrocarbons, largely of the benzanthracene series.

All these developments made necessary the provision of more adequate research facilities, which were soon provided through the purchase by Mr. Alfred Chester Beatty of the nearby Freemasons' Hospital, and the radical conversion of this building to the purposes of a modern research institute. This work was completed in 1939, when the reconstructed building was re-named the Chester Beatty Institute. Although the Institute's work inevitably suffered during the war, it was soon able to take a leading part in the expansion of cancer research in the years which followed. Inevitably the attack is now on a wider front, with emphasis on the mechanisms of carcinogenic action both by chemical agents and viruses, and involves not only chemical pathology but almost every aspect of cellular physiology, biochemistry and genetics. In this way it is hoped to make as large as possible a contribution to our knowledge of the fundamental processes of normal and abnormal growth, and to the ultimate solution of the cancer problem as a whole.

RADIOTHERAPY DEPARTMENT

In 1903 a Radiological and Electrotherapeutic Department was opened and the first Radiologist to the Hospital appointed. At about the same time a small amount of radium was presented to the hospital, and an investigation into the effects of X and gamma rays in malignant disease started. In 1910 Dr. Robert Knox was appointed to the staff, and it was very largely due to his efforts that radiotherapy in the hospital was developed. He died in September 1928 while still Director of the department, and his successors have continued the work which he started with such skill and enthusiasm. For some years, however, X-ray diagnosis and X-ray therapy were combined, while a separate Radium Department was formed in 1929. The logical combination of radium and X-ray therapy into one Radiotherapy Department, and its separation from X-ray diagnosis, was achieved in 1944

In 1930 a Chair of Radiology, the first in the University of London, was established at the Hospital, and the late Dr. J. M. Woodburn Morison

appointed to the post. In 1944, when the new Radiotherapy Department was formed, a Chair of Radiotherapy was established in its place.

In 1936 one of the first two 5 gm. teleradium units to be installed in this country was used for treatment, and the tele-radium work was expanded and improved by the conversion of this 5 gm. to a 10 gm. teleradium unit in 1947. The Hospital also led in the high voltage X-ray field since the first 350 kV X-ray therapy set in England was installed in 1930 and replaced by the first two 400 kV sets to be used here in 1938. This was followed by the installation of a 2-million volt X-ray therapy plant in 1950, and the first clinical use in this country of a 30-million volt synchrotron which has been installed in the Physics Department. Again in the low voltage field the hospital was fortunate since the first 60 kV Siemens Monopan imported into this country was presented to it in 1935.

Radioactive isotopes were used in the treatment of patients with malignant disease in 1948, and several new techniques have been developed since then.

The number of new patients seen in the department has, with the exception of the war years, been rising steadily and in 1950 was more than double the number seen in 1930. The close co-operation between the members of the staff of the Radiotherapy Department, and the other members of the clinical staff of the hospital has been a feature of the work, and this has been extended with the formation of a number of special consultation clinics in other special hospitals during the past few years.

The research activities have also expanded steadily, and the department now contains a radiobiological section with laboratories and full time research staff, and its clinical research facilities have recently been increased by the appointment of a statistician. Both the routine treatment and the clinical research activities of the Radiotherapy Department are closely associated with the corresponding sections of the Physics Department.

X-RAY DIAGNOSTIC DEPARTMENT

The diagnosis of disease is made in the X-ray Department by two methods. In some cases it is possible to observe the shadows cast by normal and abnormal organs on the fluorescent screen. In others, the parts can be seen more clearly on the X-ray film. Most examinations are of this type. In an emergency these films can be seen and a report given to the surgeon or physician within 15 minutes. In routine examinations the films are examined the following day.

These films provide evidence of disease which is not always obtainable by ordinary methods. They may show the site of abnormality and its

extent, and they provide a permanent record for other departments to measure the results of their treatment.

In the last 30 years great advances have been made in diagnostic radiology and during the same period the standard of routine work done by a department has improved considerably. It may be said that this special branch of medicine has contributed something to the general knowledge of many diseases and has supplied essential details in a few.

In addition to the discovery of new methods of examination the advances in diagnostic radiology have been made by the utilization of accumulated experience and improved technique. These advances have been facilitated by the constant improvement of apparatus which now bears little resemblance to that of 40 years ago. While this apparatus is more useful and more elaborate it is more expensive and any hospital which strives to maintain a modern department must necessarily spend large sums on equipment.

The function of the department is not limited to the diagnosis of cancer and allied conditions. For many years this hospital has served as a school for the teaching of radiology—to doctors who wish to specialize in this subject—and to technicians who intend to adopt radiography as a career. There have been many students who have attended the Diagnostic and Therapy departments. Their course of instruction lasts for two years and during this time they learn the technique necessary to examine and treat patients in both these departments. They also attend a series of lectures in physics, anatomy and allied subjects. This hospital, therefore, provides each year a comparatively large number of fully trained radiographers who now serve in hospitals throughout the kingdom.

In 1944 a library of radiographs was installed for the benefit of post-graduate students. To this has been added a collection of lantern slides. In subsequent years further films have been added and the material which is now available is extensive.

PHYSICS DEPARTMENT

In the early days, the therapeutic use of X-rays and radium in the Hospital was entirely empirical and it soon became obvious that progress could only be made on a secure scientific basis. In 1911, Major C. E. S. Phillips was appointed to the staff as a part-time physicist, and laid the foundations on which the present reputation of the Department is based. Beginning in a single underground laboratory, he carried out pioneer work on the measurement of radioactive substances and X-rays. The Hospital owes a lasting debt to his enthusiasm, skill and perseverance.

In those days no methods of measurement of radiations had been defined or agreed upon, and comparison of the results of different centres

was therefore impossible. Dr. Robert Knox, Director of the Radiotherapy Department, with great foresight, realised that further development was required on the physical side, and in 1926 a full-time physicist was appointed. Two years later, in 1928, an international standard of dose had been agreed. From this time on, the work continued to expand, particularly in the correlation of X-ray and radium dosimetry, but always within the Department of Radiology. In 1930 a Chair in Radiology was established at the Hospital and the physics section began to teach the fundamental physics of medical radiology for the University Diploma.

In view of the rapidly growing importance of medical physics, in 1936 the physics section of the Radiology Department was separated and became a separate Department under the charge of a University Reader in "Physics applied to Medical Radiology". In 1940 a Chair in Physics applied to Medicine was established, the change in title reflecting the widening scope of the work of the Department.

Progress was slowed down by the war but vital work on both dosimetry and scientific problems related to the war were carried out. The present phase of development of the Department can be traced to the year 1945 when it became clear that the developments of nuclear physics offered major opportunities in the field of medical physics. The Professor of Physics was seconded to the Atomic Energy organisation in Canada, returning the following year to apply this invaluable experience to the field of cancer. Since 1945, therefore, the Department has grown rapidly and is now one of the largest medical physics groups in the world, being equipped with such powerful weapons as the first 30 mev. synchrotron for clinical use, and handling large amounts of the new radioactive isotopes.

Throughout its history the Department has interested itself in problems of protection against radiations, a subject which at first appeared of limited interest but is now of national importance.

It is clear that physics in relation to medicine is a rapidly growing subject and that the Royal Cancer Hospital may claim to be playing its part in the development.

GRANARD HOUSE

The increasing cost of treatment and, in many cases, the impossibility of obtaining it (e.g., when a large amount of radium is required), even by the wealthy, without recourse to a hospital, led to the erection of a new wing named Granard House, which was completed in 1932, and formally opened by H.M. Queen Mary in 1934. Granard House provides for the reception of patients who are able to defray part of the cost of their maintenance, together with modified fees for medical and surgical attention; and every resource of the Hospital is at their disposal.

THE ROYAL CANCER HOSPITAL

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